

TrackDay Application User Guide



TrackDay

User Guide

Version 1.0.0(1)

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CHANGE HISTORY

Latest version

The current production version of TrackDay is Version 1.0.0 (1). The version number is in the format A.B.C(D), where:

- **A** is the Major Version number. This will only change when there is a significant change of functionality between releases, and will result in a significant change to the way the application operates.
- **B** is the Minor Version number. This will change whenever there is a change or enhancement to the functionality of the application.
- **C** is the Patch Version number. This will change whenever there are minor changes and bug fixes to the application.
- **D** is the Database Version. This changes whenever there are changes to the internal database schemas used by the application. These are implemented in a way that maintains the integrity of any stored data.

Change Records

Version	Change Details
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1.0.0(1)	First production release of the application.
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APPLICATION OVERVIEW

The idea for the TrackDay application was conceived as a means of providing motor sports enthusiasts with a means of tracking and logging their driving performance on a racing circuit. To this end, the application allows the user to map out a course on the circuit, and mark a number of sector points around the circuit. The user can then, in timer mode, drive round the track and the application will automatically record their sector and lap times over each timed run. The collected data can then either be reviewed within the application or saved to an xml file for further processing.

The Free and The Full Versions

The application has been developed as two versions, the **free** version, which is free contains the core functionality with a number of limitations. The **free** version can be upgraded to the **Full** version, which provides access to all functionality of the application.

The restrictions of the **free** version are as follows:

- On application startup, the user is periodically asked if they want to upgrade.
- It is not possible to save data to more than one fixed file.
- It is not possible to load saved data from more than one fixed file.

Planned Future Enhancements

The following enhancements are planned for future releases of the Full version:

- Export data in .csv format for easy reading into Excel.
- Graphical review of recorded data.

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Application Functionality

The functionality of the application is described in the following paragraphs on a screen by screen basis.

{To Do: Add a screen flow diagram here.}

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USER GUIDE

Main Screen

The home screen displays as soon as the application is started. It provides a quick means of navigation to all of the major functions of the application.

The application depends upon GPS being activated in order to work. If GPS is not activated, the application will provide an indication (Figure 1).

The application has been developed to also work with the device operating in landscape mode (Figure 2). The display layout is altered slightly, but all functions are available in either mode.

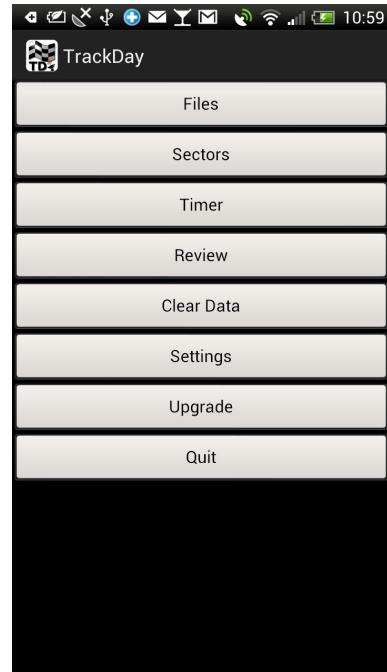
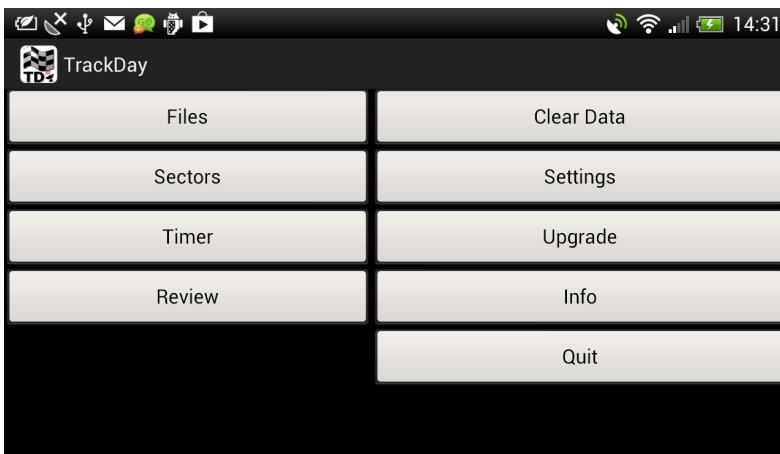


Figure 1: Main Screen

Figure 1: Main Screen

The free version of the application will periodically present the user with the option to upgrade to the full version. This occurs once in every five times the application is executed. Selecting **Yes** will activate the upgrade screen. Selecting **No** will drop back to the application main screen.

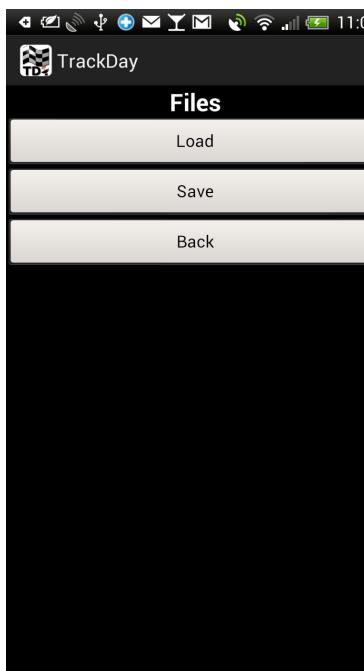


Figure 2: Landscape Mode

The free version of the application will periodically present the user with the option to upgrade to the full version. This occurs once in every five times the application is executed. Selecting **Yes** will activate the upgrade screen. Selecting **No** will drop back to the application main screen.

Figure 2: Landscape Mode

The files screen provides features that will allow application data to be saved to an external file and retrieved from files (Figure 3).

Selecting **Back** returns to the home screen. Selecting **Load** opens the file load dialog (Figure 4). The file to be loaded can be selected by clicking on the drop down field (Figure 5) which will then list all of the available data files in the data transfer folder. Clicking on **Ok** will perform the file load operation.

Note: The free version of the application will only load the file **data.xml** and does not permit loading of other data files.

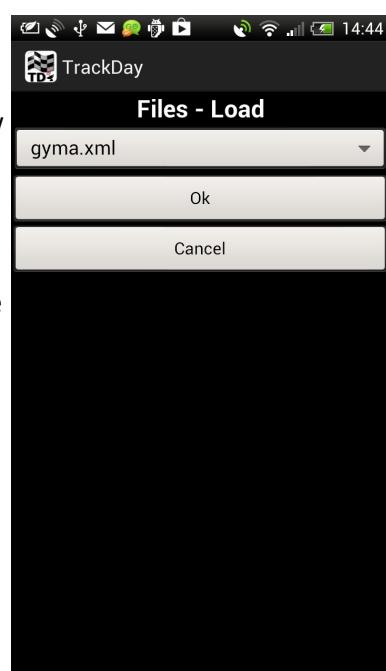


Figure 3: Files Screen

Figure 4: File Loading

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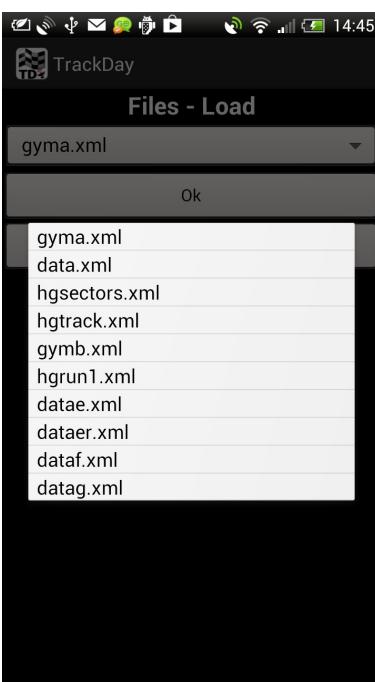


Figure 5: File Selection

Selecting **Save** opens the file save dialogue. Files are stored on the device's SD Card storage directory in a folder “**/TrackDay/export**”. The default file extension is .xml. The default file name is “**data**”. The user can change the file name by editing the text.

Clicking on **Ok** will perform the file save operation.

Note: The free version of the application will only save data to the file **data.xml** and does not permit saving to other files.

Sectors Screen

The sectors screen provides the ability for a user to define the specific sector points around the circuit against which measurements will be performed (Figure 6).

To mark the sectors, click the **Start** button to start recording and then drive around the circuit. At each sector point, press the **Mark** button (Figure 7) to record the sector. On completion of the lap, click **Stop** to stop recording. The recorded sectors will then be used as a basis for any timed laps(Figure 8).

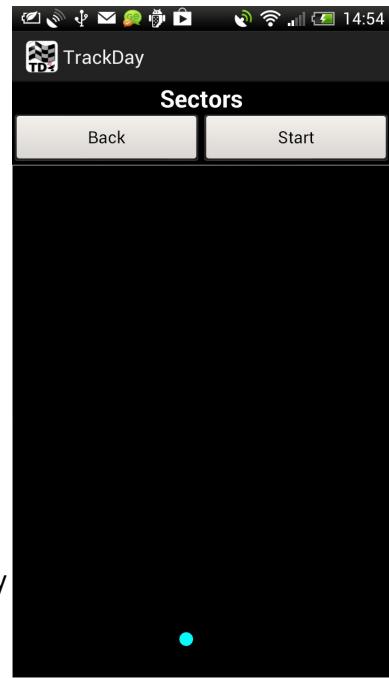


Figure 6: Sectors Initial Screen

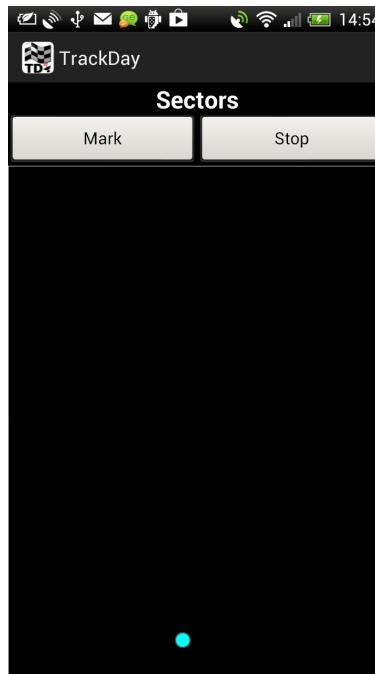


Figure 7: Sector Marking

The recorded sectors are saved along with any other data as part of the **File Save** operation.

Note: The application works best if the last recorded sector is the lap start/finish line.

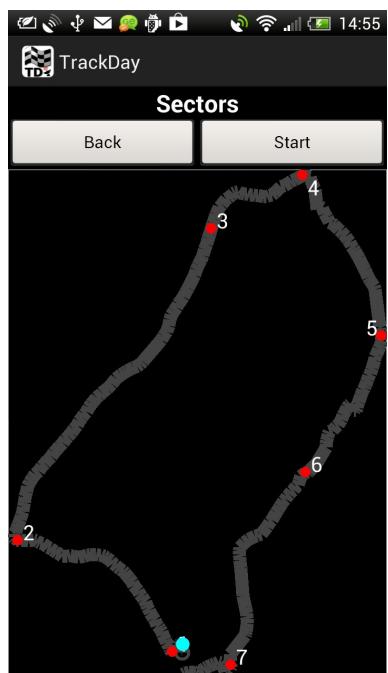


Figure 8: Sector Map

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Timer Screen

The timer screen allows the user to automatically time their run around the circuit. Clicking **Start** will commence the timed run, and **Stop** will then stop the recording. Further timed runs can be recorded by again pressing **Start** and **Stop**.

At the start of the timed run, the application selects the first sector. When this is driven by, the time is logged and the next sector is selected. When the final sector is passed, the application automatically starts logging a new lap and selects the first sector again.

The example illustrated in Figure 9 shows an in progress recording. The driver is currently heading towards Sector 7. The elapsed time since the previous sector is 7.08 seconds. The total time from the start of the current lap is 10.17 seconds.

The previous sector time was 0.05 seconds and this was the fastest time recorded for this sector (green colour). It was 0.08 seconds faster than any other times for sector 6.

The previous sector's lap time (lap start to end of sector) was 3.08 seconds and was 1.27 seconds slower than the fastest lap time to this sector (red text).

Timer	
Skip	
Mark	
Stop	
Map	
S7	0:45.80
L	0:48.88
-	0:00.05 -00.08
-	0:03.08 +01.27
D	278.89m
TTG	-

Figure 10: Timer - Data Mode

Clicking the Data button toggles the display between Data and Map modes (Figure 10).

In Data mode, the distance from the next sector is displayed, along with the Time To Go to the next sector.



Figure 9: Timer - Map Mode

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Review Screen

The review screen allows the user to review the recorded data for the session. Data can be filtered by Timed Run, Lap and Sectors. The review screen displays the sector and lap times for each selected sector.

Clear Data

Clicking the **Clear Data** button allows the user to erase any recorded data.

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Settings Screen

The settings screen allows the user to change any of the application's settings.

Upgrade Screen

The upgrade screen allows the user to purchase the upgrade of the application to unlock the full application functionality.

Quit

The quit button is used to exit the application. If the application contains any unsaved data, the user will firstly be prompted to confirm that they really do wish to exist the application without saving data.

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Software Upgrades

Upgrades to the software will be posted regularly on the Android Market. All upgrades will be implemented in a way that will prevent any data loss during the upgrade process.

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Help and Support

Any queries for help and support with the application should be directed to trackday@undeadmonkey.org.uk

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